



Terry Tamminen  
Agency Secretary  
Cal/EPA



## Department of Toxic Substances Control

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Cypress, California 90630-4732



Arnold Schwarzenegger  
Governor

June 30, 2004

Ms. Yvonne Meeks  
Portfolio Manager - Site Remediation  
Pacific Gas and Electric Company  
4325 South Higuera Street  
San Luis Obispo, CA 93401

**APPROVAL WITH CONDITIONS, INTERIM MEASURES NO. 3, DATED JUNE 21, 2004, PACIFIC GAS AND ELECTRIC COMPANY, TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA (EPA ID NO. CAT080011729)**

Dear Ms. Meeks:

The Department of Toxic Substances Control (DTSC) has completed our review of the *Summary of Proposed Project for Interim Measures No. 3*, dated June 21, 2004 submitted by Pacific Gas and Electric Company (PG&E). DTSC is providing conditional approval of Interim Measures No. 3 as described below.

The primary Interim Measures No. 3 components, as presented, include additional groundwater extraction from well TW-2 or additional wells, piping and conveyance of extracted groundwater to a treatment system, treatment of extracted groundwater using reduction-precipitation-filtration and reverse osmosis, and management of treated groundwater. The treatment process will be located on property now owned by the Metropolitan Water District of Southern California (San Bernardino County assessor's parcel number 650-151-06). The goal of Interim Measures No. 3 continues to be hydraulic control of the plume boundaries near the Colorado River to achieve a net reversal of groundwater gradient from the Colorado River.

PG&E has determined, using a computer model, that minimum pumping rates required to maintain an inward groundwater gradient away from the Colorado River based on United States Bureau of Reclamation (USBR) 2004 to 2006 projected releases from Davis Dam to be as follows:

January	46	gallons per minute (gpm)
February	2	gpm
March	0	gpm
April	0	gpm
May	1	gpm

June	52	gpm
July	46	gpm
August	70	gpm
September	90	gpm
October	132	gpm
November	62	gpm
December	96	gpm

Interim Measures No. 3 as described in the June 21, 2004 submittal is approved with the following constraints and conditions listed below:

1. The June 21, 2004 document does not include appropriate signatures or a transmittal letter signed by a PG&E representative. In addition, the document is not signed by an appropriately licensed professional taking responsibility for the work. Future submittals should follow a report or letter format with appropriate annotation of references and attachments. The first paragraph of the introduction requests DTSC to approve an exemption from the California Environmental Quality Act (CEQA). PG&E should focus on the practical needs of the Interim Measures as the basis of the project. The CEQA determination is made by the lead agency and should not be the central objective of the project. DTSC, as the lead agency, will fulfill CEQA in a manner which is commensurate with the required project.

Condition 1: No later than July 8, 2004, PG&E shall revise the first paragraph of the introduction to request a decision from DTSC in approving the Interim Measure No. 3 rather than the Notice of Exemption. PG&E should define the objective of the Interim Measure as maintaining an inward groundwater gradient away from the Colorado River by additional pumping, treatment and management of extracted groundwater. The revised proposal should be submitted as a revision to the June 21, 2004 submittal for Interim Measure No. 3. The revised proposal should be signed by a licensed professional taking responsibility for the work.

2. The section titled Current Options on MW-20 Bench, does not accurately describe the current pumping activities approved by DTSC. The current pumping activities include pumping from only TW-2D at an approximate rate of 20 gallons per minute (gpm).

Condition 2: PG&E shall clarify the current pumping operations in the revised proposal required under Condition 1.

3. Anticipated pumping rates based on river levels related to projected releases from Davis Dam are only provided through 2004.

Condition 3: No later than July 8, 2004, PG&E shall provide the anticipated pumping rates through 2006. This information can be provided in the revised proposal required under Condition 1.

4. Pumping rates for February, March, April and May indicate little or no pumping will be required.

Condition 4: PG&E shall maintain a minimum average monthly pumping rate of 20 gpm or as required by DTSC during these periods.

5. As described in the section titled Current Operations on MW-20 Bench, PG&E is currently modifying the pumping and storage facility at the MW-20 bench to provide the necessary capacity for batch treatment. PG&E anticipates the modified facility to be able to process 30 gpm. This modification is projected to be completed by July 19, 2004. PG&E also anticipates that after initial testing and operation, the MW-20 Bench facility may be able to manage up to 40 gpm.

Conditions:

5A. PG&E shall increase the pumping rate at TW-2D to 30 gpm only after receiving approval from DTSC, the Department of the Interior, and all necessary local jurisdictions. Any increase or decrease in the pumping rate should be made only after final approval by DTSC.

5B. PG&E shall provide DTSC a minimum of five (5) working days to evaluate any proposed changes in the average monthly pumping rates. Average monthly pumping rates shall not be changed without DTSC approval.

6. As described in the section titled Proposed Project, PG&E states that the two existing extraction wells (TW-2S and TW-2D) are capable of accommodating the peak extraction rate. Although the technical committee has recommended drilling additional extraction wells, DTSC as the lead Administrating Agency, has not made a decision regarding the number and locations of additional extraction wells at this time. The consideration of additional extraction wells is premature since the extent of groundwater contamination remains undefined. Specifically, the groundwater contamination in the deeper aquifer remains undefined south of monitoring MW34-80 and north of MW-37D along Bat Cave Wash toward the Colorado River.

Conditions:

6A. No later than July 16, 2004, PG&E shall prepare and submit the required workplan, documentation and schedule to obtain necessary authorization for monitoring well drilling on Bureau of Land Management (BLM) and Metropolitan Water District (MWD) property. A map of the anticipated monitoring well

locations is enclosed. Please note that some monitoring well locations (SO-1, SO-3 and SO-4) were previously authorized by BLM.

6B. If DTSC determines that installation of additional extraction wells and conveyance piping is required, PG&E shall prepare and submit a workplan to DTSC for review and approval.

7. As described in the section titled Proposed Project, PG&E indicates that the proposed piping and conveyance alignment for the project will follow existing access roads and avoid impacts to the Topock Maze and other cultural resources.

Conditions:

7A. PG&E shall work closely with the Bureau of Land Management (BLM), Indian Tribes and other interested stakeholders to identify potential impacts to cultural and biological resources. PG&E shall arrange to meet with interested stakeholders and advise DTSC of scheduled meetings. PG&E shall submit to DTSC a report that identifies and describes potential impacts to cultural and biological resources and mitigation measures to avoid potential impacts. The report must be reviewed and approved by DTSC prior to commencement of any construction activities. PG&E shall obtain BLM approval for any proposed piping, collection and conveyance alignment potentially impacting BLM property prior to installation.

7B. PG&E shall submit to DTSC for review and approval specific details related to the treatment process, equipment, site layout and location of equipment, specifications of influent and effluent lines or other equipment and activities as may be specified by DTSC prior to beginning field work.

8. As described in the section titled Proposed Project, PG&E proposes to inject treated groundwater on parcel 650-151-06. PG&E further states that "Alternatively, and at the direction of DTSC and the Consultative Workgroup, PG&E will evaluate the feasibility of discharge of the treated water to the Colorado River." ... "PG&E will also evaluate re-use in the cooling towers at PG&E's Compressor Station." Please note that, while DTSC seeks input and recommendations from the Consultative Workgroup, the Consultative Workgroup does not provide direction to PG&E. DTSC is the lead regulatory Administrating Agency and is solely responsible for providing direction and approvals to PG&E, except with respect to activities on federal land. Although PG&E is considering trucking of treated water to the PG&E facility and offsite facilities to accommodate increased flow, trucking of additional treated water has additional environmental impacts and the BLM has indicated that increased trucking is a concern and would require their approval. In addition, the extent of groundwater contamination and the subsurface geology and hydrogeology remains undefined in the area proposed for injection wells.

Conditions:

8A. PG&E shall, on a parallel and expedited path, prepare and submit for approval to the California Regional Water Quality Control Board (RWQCB) and complete any required public notice in order to seek permit approval from the RWQCB during the September 2004 Board Meeting the following:

1. Application for the injection of treated water.
2. Application for the discharge of treated water to the Colorado River pursuant to a National Pollutant Discharge Elimination System (NPDES) permit.
3. Application for the re-use of treated water in the cooling towers at PG&E's Compressor Station pursuant to Waste Discharge Requirements (WDR) and/or other permits that may be necessary. The application and permit shall be consistent with maximum flow capacity of 60 to 70 gpm available at the PG&E compressor station.

8B. PG&E shall prepare and submit to DTSC for review and approval a workplan and schedule to characterize the subsurface geology, hydrogeology, aquifer evaluation and testing procedures to determine if the injection wells will be capable of maintaining the projected anticipated maximum flow rate from the treatment system and procedures for the evaluation of impacts from the proposed injection. A workplan and schedule shall be submitted to DTSC no later than July 19, 2004.

9. The Microsoft Project schedule in the proposal states that thirty (30) percent complete design drawings are sufficient for obtaining all permits and regulatory approval. Thirty percent design drawings are not sufficient for obtaining all permits and regulatory approvals. Thirty percent design drawings are a preliminary step in the approval process. PG&E's proposal also describes a process in which DTSC will participate in an "on board" review with PG&E engineers and planners.

Conditions:

9A. While DTSC is willing to consider an on-board review process, PG&E shall provide DTSC for review and approval a schedule for the process. This process shall commence in July 2004 with a kick-off meeting to be proposed by PG&E.

9B. PG&E shall prepare and submit to DTSC additional workplans, specifications and reports for review and approval as may be directed by DTSC.

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9C. PG&E shall submit weekly Interim Measures No. 3 progress reports due on Friday of each week beginning on July 9, 2004. An EMAIL version on Friday followed by a mailed hard copy will be acceptable. DTSC will meet and discuss with PG&E the required content and format of the weekly progress reports.

10. The actual location of the property boundaries for parcel number 650-151-06 are uncertain.

Condition 10: PG&E shall determine the exact property boundaries for parcel 650-151-06. A copy of the survey map shall be submitted to DTSC prior to commencing any construction activities.

11. The entire Interim Measure No. 3 proposal depends upon PG&E's ability to negotiate the use of parcel number 650-151-06. PG&E must demonstrate a reasonable good faith effort in its negotiations for the use of this property.

Condition 11: PG&E must provide a summary of the progress of negotiations in the weekly progress report described in Condition 9C until the use of the land is determined. Upon completion of the land use negotiation, PG&E shall provide to DTSC a copy of the use agreement.

In light of the significant number of uncertainties that need to be addressed, DTSC reserves the right to identify additional conditions that must be satisfied by PG&E prior to approval of workplans or implementation of on-site activities under this Interim Measure No. 3.

If you have any questions, please contact Mr. Norman Shopay at (510) 540-3943.

Sincerely,



Karen Baker, C.E.G., C.H.G., Chief  
Geology, Permitting and Corrective Action Branch

NTS/120J

Enclosure: Proposed Well Locations

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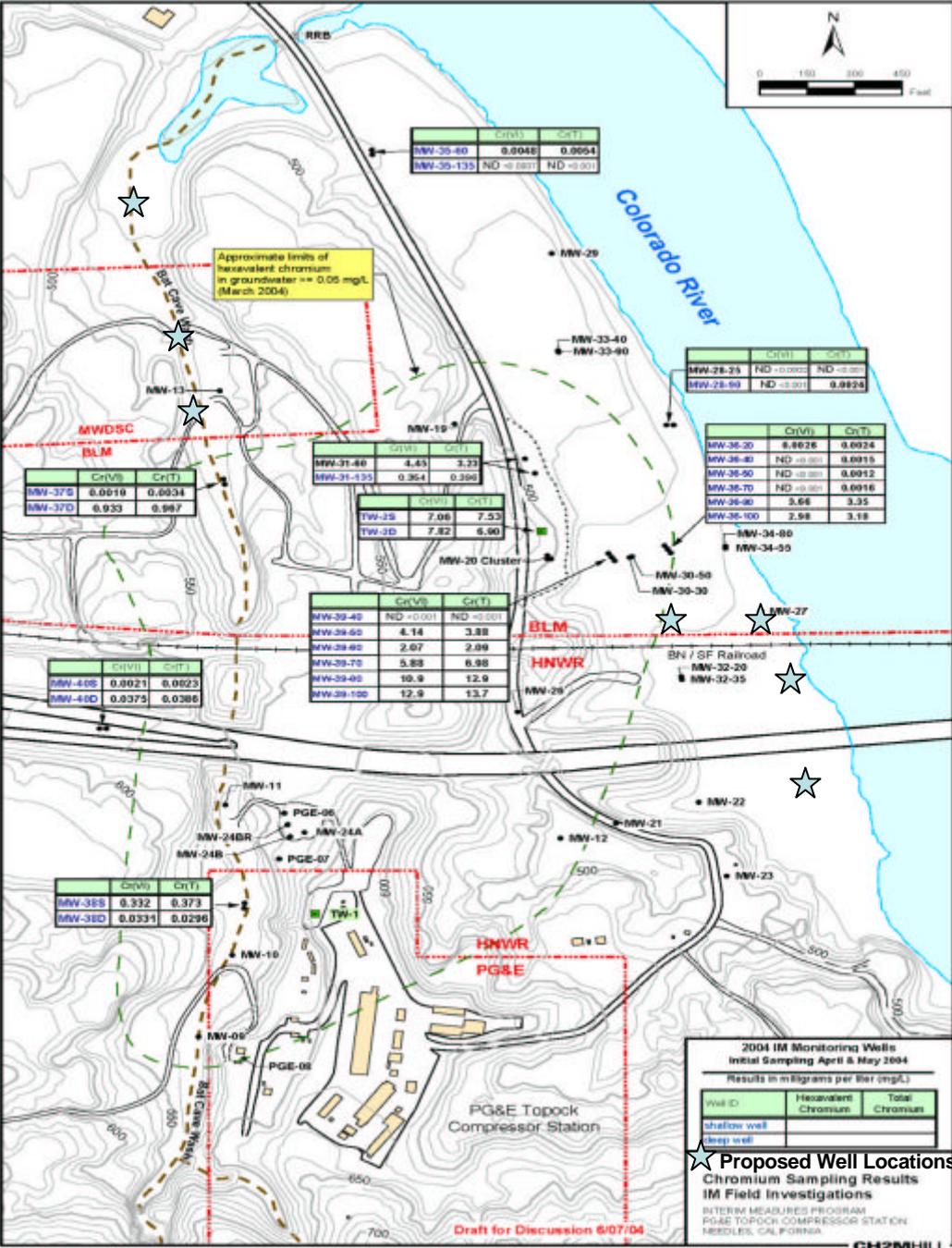
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PG&E Topock Consultative Workgroup Members  
Via e-mail



Approximate limits of hexavalent chromium in groundwater = 0.05 mg/L (March 2004)

	Cr(VI)	Cr(T)
MW-25-80	0.0048	0.0054
MW-25-135	ND < 0.001	ND < 0.001

	Cr(VI)	Cr(T)
MW-28-25	ND < 0.002	ND < 0.001
MW-28-60	ND < 0.001	0.0024

	Cr(VI)	Cr(T)
MW-35-20	0.0026	0.0034
MW-35-80	ND < 0.001	0.0015
MW-35-50	ND < 0.001	0.0012
MW-35-70	ND < 0.001	0.0016
MW-35-60	5.68	3.35
MW-35-100	2.98	3.18

	Cr(VI)	Cr(T)
MW-37S	0.0019	0.0034
MW-37D	0.033	0.067

	Cr(VI)	Cr(T)
MW-31-60	4.45	3.73
MW-31-135	0.364	0.390

	Cr(VI)	Cr(T)
FW-2S	7.08	7.53
FW-3D	7.82	5.90

	Cr(VI)	Cr(T)
MW-39-40	ND < 0.001	ND < 0.001
MW-39-60	4.14	3.88
MW-39-80	2.07	2.99
MW-39-70	5.88	6.98
MW-39-90	10.9	12.9
MW-39-100	12.9	13.7

	Cr(VI)	Cr(T)
MW-40S	0.0021	0.0023
MW-40D	0.0375	0.0386

	Cr(VI)	Cr(T)
MW-35S	0.332	0.373
MW-35D	0.0331	0.0296

2004 IM Monitoring Wells  
Initial Sampling April & May 2004  
Results in milligrams per liter (mg/L)

Well ID	Hexavalent Chromium	Total Chromium
shallow well		
deep well		

★ Proposed Well Locations  
Chromium Sampling Results  
IM Field Investigations  
INTERIM MEASURES PROGRAM  
PG&E TOPPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA  
CH2M HILL